

## CLAIMS

Please enter the claims as indicated below:

Claims 1-30 (cancelled).

31. (amended twice): A calcining plant for particulate material comprising:  
a calcining reactor having a calcining zone;  
a burner arranged to produce a flame within a region internally of said calcining  
reactor, said burner being designed to generate hot combustion gases and a calcining temperature  
of at least 1700°F in said calcining reactor; and  
means for producing a swirling flow of particulate material around said region  
and a gradual blending of the particulate material with the hot combustion gases, said calcining  
reactor being uninsulated internally thereof along said calcining zone.

32. (amended): The plant of claim 31, further comprising means for adjusting the  
temperature in said calcining reactor by varying the rate of admission of particulate material into  
said calcining reactor.

33. (canceled).

34. (amended): The plant of claim 31, wherein said producing means comprises means for  
introducing particulate material into said calcining reactor substantially tangentially of said  
calcining reactor.

35. (canceled).

36. (canceled).